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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/325,698	06/03/1999	DAVID X. CHEN	064731.0119	3154

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EXAMINER

NGUYEN, HANH N

ART UNIT	PAPER NUMBER
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2662

DATE MAILED: 05/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/325,698

Applicant(s)

CHEN ET AL.

Examiner

Hanh Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Application filed on 2/13/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8,10-14,16,18-20 and 22 is/are rejected.
- 7) ☒ Claim(s) 7,9,15,17,21 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3&6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 7 are 15 are objected to because of the following informalities: “the second plurality of transport signals” and ”the third plurality of transport signal” should be changed to “the second of the plurality transport signal” and “the third of plurality transport signals” to prevent indefinite.

“A second time slot” should be chnaged to “said second time slot” on line 6 lacks of antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 10, 18, 19, it is not clearly stated what is meant by “switching the second plurality of transport signals at second level that is a more granular level than the first level”

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 6, 10, 11, 12, 14, 18, 19, 20 and 22 are rejected under 35 USC 103(a) as being unpatentable over **Budhraj** (US Pat. No. 6,324,185 B1) in view of **Chopping** (US Pat. No. 6,041,055).

In claims 1, 10 and 18, 19, 22, **Budhraj** discloses, in Fig.3, a switching subsystem 52 (a switching complex) comprising a TDM switching subsystem 56 (a subrate switching fabric), an ATM switching subsystem 54 (ATM switching fabric). The TDM switching subsystem 56 and the ATM switching subsystem 54 receiving incoming traffic & perform switching of the incoming traffic for transferring to other component of network (receiving& switching TDM information and ATM cell for transmission to external network element) via line card interfaces 62 (interface cardreceiving incoming traffic). See col.5, lines 15-25. The ATM switching subsystem 54 can be synchronous optical switching subsystem(see col.2, lines 47-55). Therefore, it would have been obvious to add a synchronuous transport switching in the switching subsystem 52 to receive & switch transport signal. **Budhraj** does not disclose TDM signal is more granular than the first signal level. **Chopping** discloses, in Fig.1, a switching fabric comprising two switches of different granularities, one is more granularity than the other. They are connected to a primary rate termination (one switch whose granularity is more than the other). See col.5, lines 10-20 & Abtract. Therefore, it would have been obvious to one skill in the art to use the **Chopping** 's granularily in order to switch TDM signals at the TDM switching subsystem 56 at more granular level than the Synchronuous transport signal **et al.** so that TDM signals can be switched at a more granularity level than STS-1 level.

In claim 3, **Budhraj** discloses the network supports a cross-connect between network termination and subscriber. (See col.5, lines 35-55) (switching primary rate signals at a virtual tributary level).

In claims 6 and 14, **Budhraj** discloses a backplane interface 58 which provides mechanism for connecting the switching subsystem 52 to other subsystems (signal distributor receives first , second and third transport signals, and communicate the transport signals to its associated switching fabric). See col.5, lines 25-30.

In claims 11 and 12, the limitations of these claims have been addressed in claim 1, 10.

In claim 20, the most of limitations in this claim have been addressed in claim 1, 10, 18, 19. In addition, **Budhraj** discloses, in Fig.3, a redundant subsystem 60 (redundant switching complex) which interfaces primary switching subsystem 52 (primary switching complex) to another secondary switching subsystem in a redundant main controller 26'. The redundant subsystem 60 switchover operation to to redundant MSC 26' wwhen the MCS 26 is disabled. This means that all transport signals will be copied to the redundant switching subsystem in the redundant MCS 26'. See col.5, lines 30-35.

Claim 4 is rejected under 35 USC 103(a) as being unpatentable over **Budhraj** (US Pat. No. 6,324,185 B1) in view of **Chopping** (US Pat. No. 6,041,055), aand further in view of **Wiley et al.** (US Pat. No. 6,324,185 B1).

In claim 4, **Budhraj** does not discloses an add-drop multiplexer. **Wiley et al.** discloses Add-Drop Multiplexer 206 provides a call signaling via virtual connection VCI between communication users (Add/Drop Multiplexer perform ATM layer processing). See col.12, lines

27-50. Therefore, it would have been obvious to one ordinary skill in the art include an add-dro multiplexer into the ATM switching subsystem of **Budhraj** in order to perform ATM layer propocessing.

Claims 2, 5, 8, 13 and 16 are rejected under 35 USC 103(a) as being unpatentable over **Budhraj** (US Pat. No. 6,324,185 B1) in view of **Chopping** (US Pat. No. 6,041,055), and further in view of **Flanagan et al.** (US Pat. No. 5,159,595).

In claims 8 and 16, **Budhraj** does not disclose a signal selector receiving transport signals, and facilitate transmission of the transport signals to external network elements. **Flanagan et al.** discloses a selector 56, in Fig.5, that receives transport signal STS-1 and transmit to other node in a TDM ring (a signal selector receiving transport signals, and facilitate transmission of the transport signals to external network elements). See col.8, lines 50-55. Therefore, it would have been obvious to one skill in the art to use the signal selector of **Flanagan et al.** into the main controller system 26 in order to switch different transport signals for transferring to external components.

In claims 2, 5 and 13, **Budhraj** does not disclose a first time slot interchange, a second time slot interchange receiving transport signals. **Flanagan et al.** discloses a TDM ring connecting nodes 1-4. Node is is described in Fig.5 as folllow: STS-1 signal is received at TSI 52 via interface circuit 26 (a first time slot interchange switching transport signal at first level). Transport signals may be received at TSI 54 (second TSI). See col.8, lines 45-50. Therefore, it would have been obvious to one skill in the art to combine the time slot interchanges with **Budhraj** to switch /route traffic to different intermediate device in a TDM ring.

Allowable Subject Matter

Claims 7, 9, 15, 17, 21 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In claims 7 and 15, the prior art does not disclose a bridge operable to duplicate the first, second, and third pluralities of transport signals, and to send one copy of transport signals to the primary switching fabric and another copy of the transport signals to a second time slot interchange; and the second time slot interchange operable to receive the transport signals, to route the second of plurality transport signals to the substrate switching fabric, and to route the third of plurality transport signals to the asynchronous transfer mode switching fabric.

In claims 9 and 17, the prior art does not disclose a third time slot interchange operable to receive switched transport signals from the asynchronous transfer mode switching fabric and the substrate switching fabric, and to associate the switched transport signals with time slots on which the transport signals were originally received in the second time slot interchange.

In claim 21, the prior art does not disclose associating the second plurality of transport signals with a first range of time slots associated with the substrate switching fabric; and associating the third plurality of transport signals with a second range of time slots associated with the ATM switching fabric.

Response to Arguments

Applicant's arguments with respect to claims 1-6, 8, 10-14, 16, 18-20 and 22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Christie et al. (US Pat. No. 6,002,689) discloses System and Method for Interfacing a Local Communication Device.

Dendi et al. (US Pat. No. 6,208,657 B1) discloses Programmable Gateway for a Virtual Bearer Channel Platform.

Sproat et al. (US Pat. No. 6,643,297 B1) discloses Network Service Provider Architecture in Communications Network.

Diaz et al. (US Pat. No. 5,809,021) discloses MultiService Switch for a Telecommunication Network.

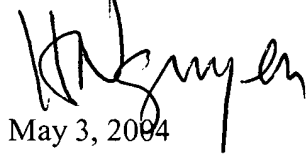
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 703 306-5445. The examiner can normally be reached on Monday-Friday from 8AM to 5PM. The examiner can also be reached on alternate

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached on 703 306-5445. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh Nguyen

A handwritten signature in black ink, appearing to read 'Hanh Nguyen', written over the typed name and date.

May 3, 2004